ESPAM2 Validation

Allan Wylie IDWR

Two Proposals

- Without adjusting calibration add all available years (2009, 2010?)
- Do a pre-irrigation scenario and compare with USGS Bulletin 199
  - Set diversions to zero
    - Except for Big and Little Lost to simulate flow onto ESPA
  - Set ET adjustment factors to zero
  - Set irrigated lands to zero
  - Set canal seepage to zero
  - Set fixed point to zero except for wetlands
  - Set off site pumping to zero
  - Remove American Falls Reservoir
  - Add wetlands points within footprint of American Falls Reservoir

Snake River Plains of Idaho by Israel C Russell USGS Bulletin 199 pg 25-26

1897, at Montgomery Ferry, midway between American Falls and Shoshone Falls, is 10,064 cubic feet per second; the maximum being in May and June, when it reaches about 26,000 cubic feet per second, and the minimum in August, September, or October, during which months its volume is approximately 4,400 cubic feet per second.[b]

One of the remarkable features of Snake River Canyon is the abundance of large springs which pour out from its northern wall, especially in the portion of its course between Shoshone Falls and Bliss. The aggregate volume of these springs is many thousand cubic feet per second. They flow steadily without observed fluctuations in volume throughout the year. During August and September, when the Snake is low, their combined volume is estimated to be equal to if not greater than that of the river itself where it passes over Shoshone Falls. Perhaps the finest known exhibition of cataracts formed by springs of large volume issuing from rocks far up the faces of nearly vertical precipices is furnished at what is known as The Thousand Springs, situated on the northern side of Snake River

Snake River Plains of Idaho by Israel C Russell USGS Bulletin 199 pg 27

The volume of water has never been accurately measured, but within a space about half a mile in length at The Thousand Springs proper is estimated by Mr. A. Ferguson, a hydraulic engineer familiar with the locality, at 20,000 miner's inches (or approximately 500 cubic feet) per second.

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Snake River Plains of Idaho by Israel C Russell USGS Bulletin 199 pg 173

Location of well.	Total depth.	Depth of water.	Temperature.
	Feet.	*Feet.*	*Degrees F.*
Wapi	250		
Minidoka	425	375	55
Kimama	325	265	56
Owinza	401	341	54
Bliss	483	430	70
Cleft	450		73
Bisuka	380		
Owyhee	600	530	70
Mora	380		
Nampa	114	40	61.[illegible]

Russell obtained well data from Oregon Short Line Railroad and DTW from S Turner

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The springs near Bliss are at or above 2900 ft

End